

Soil and Water Remediation, Groundwater/Vadose Zone (RL-0030)

**R. T. Wilde, Vice President of Solid and
Waste Water Remediation/Groundwater
Vadose Zone & Waste Sampling and
Characterization Facility/(509) 372-8123**

Testing a
more
efficient
drilling
technology



Overview

This section addresses work in Project Baseline Summary RL-0030, *Soil and Waste Remediation Groundwater/Vadose Zone*.

NOTE: Unless otherwise noted, all information contained herein is as of the end of October 2004.

Notable Accomplishments

Monitoring Well Installation: A major project objective was achieved in October when a groundwater monitoring well for the 200-UP-1 operable unit was completed, bringing the total-to-date number of wells to maintain compliance with the Tri-Party Agreement (TPA) to 30. Under the TPA M-24 milestone, 60 wells must be completed by December 31, 2006. The project is ahead of schedule to meet this final date.

Well Decommissioning: Some of the older wells on the Hanford Site were constructed in such a way that they are not sealed against the soil which can provide a pathway for water and contamination to move deep into the soil zone and even to groundwater. The Groundwater Remediation Project is moving forward with decommissioning a significant number of these wells, and awarded a contract to decommission 72 of the most difficult wells. The challenge with these wells is that they have multiple steel casings, one inside the other, that require the use of a jet-shot perforation technique that uses explosives to penetrate the casings. Cement, or grout, is then poured into these wells and forced out through the perforations to the soil. Heightened security concerns surrounding the use of explosives require extensive coordination in order to develop the statement of work for this activity.

Strontium-90 Cleanup: The groundwater pump-and-treat system at the 100-N Area is not an effective long-term remediation method. The Groundwater Remediation Project is accelerating the process to replace the pump-and-treat with other methods. A review draft of the 100-NR-2 Strontium-90 alternative treatment technologies report was completed and submitted to DOE and regulatory agencies in October.

Enhanced Access Penetration System Groundwater Well Sampling: In September, the successful implementation of this innovative technology for installing groundwater wells was reported for a well in the 100-D Area. This well was sampled in October and hexavalent chromium was measured at 3,600 micrograms per liter, providing new insight on the geometry of the chromium plume. Of even more significance is that the Groundwater Remediation Project has opened discussions with the State of Washington Department of Ecology to pursue the granting of a variance to allow the use of these cost-effective wells in long-term monitoring networks.

Waste Sampling and Characterization Facility (WSCF): FH received and installed equipment and instrumentation supporting the Waste Isolation Pilot Plant program increase in sampling scheduled for January 2005. This includes a new gas chromatograph/mass spectrometer, four mini-gas chromatographs, and new canister cleaning equipment. For the month of October, the WSCF Lab performed approximately 2,875 analyses, and reported data for approximately 16,623 analytes.

Anticipated FY 2005 FH Funds (\$M)

	FY 2005 Anticipated Funding w/Carryover
Soil & Water Remediation, Groundwater/Vadose Zone	\$ 61.3

FY 2005 Schedule/Cost Performance (\$M)

	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion
Soil & Water Remediation, Groundwater/ Vadose Zone	\$3.2	\$2.8	\$2.5	-\$0.5	-14.6%	\$0.3	9.3%	\$55.7

Numbers are rounded to the nearest \$M and include the closure services allocation.

Schedule Performance (-\$0.5M/-14.6%): The schedule variance is mainly due to the delay in the award of the jet-shot contract (well deactivation and decommissioning) involving extensive security issues, and the behind-schedule condition of the remediation decision support (characterization of systems).

Cost Performance (\$0.3M/9.3%): The cost savings was incurred on the conceptual design for the refurbishment of the Central Plateau Raw Water Reservoirs.

Performance Analysis FYTD and Monthly (\$M)

